

IN THE CLAIMS:

Please amend the claims as shown below. The claims, as currently pending in the subject application, now read as follows:

1. (Currently Amended) A data transfer method in an image forming apparatus in which communication between a first controller and a second controller is performed via signal lines, wherein the first controller controls an engine section for forming an image, wherein the engine section includes which comprises a nonvolatile memory, and is constituted by an engine section which forms an image and a controller section which wherein the second controller transmits image data to the engine section first controller, the method comprising steps of:

transferring rewrite data from the second controller to the first controller via a signal line to rewrite the nonvolatile memory, in synchronization with a control signal notified from the first controller to the second controller via another signal line; and establishing synchronization of data transfer by a predetermined control signal of serial communication when data should be transferred from the controller section to the engine section to rewrite the nonvolatile memory; and

rewriting the nonvolatile memory of the engine section by the rewrite data transferred in synchronism.

2. (Original) The method according to claim 1, wherein the control signal is used as a predetermined signal in an image forming operation and as a sync signal in rewriting the nonvolatile memory.

3. (Currently Amended) The method according to claim 1, wherein the engine-section first controller controls the control signal to notify the second controller section of a state of the engine-section first controller.

4. (Currently Amended) The method according to claim 3, wherein the state of the engine-section first controller is one of a data transfer error, an erase or rewrite operation result of the nonvolatile memory, and an end of the rewrite operation of the nonvolatile memory.

5. (Currently Amended) The method according to claim 1, wherein the engine-section first controller controls the control signal to an OFF state in accordance with data reception from the second controller section and to an ON state when preparation for next data reception is ended.

6. (Currently Amended) The method according to claim 1, wherein the second controller section monitors a change of the control signal to an ON state for a predetermined time to detect a state of the engine-section first controller.

7. (Currently Amended) The method according to claim 6, wherein the predetermined time changes depending on at least a size of the rewrite data to be transferred and a block size of the nonvolatile memory to be erased.

8. (Currently Amended) The method according to claim 1, wherein the rewrite data is a control program code data.

9. (Original) The method according to claim 1, wherein the control signal is a signal that indicates a state change of the engine section.

10. (Original) The method according to claim 1, wherein the nonvolatile memory is a flash memory.

11. (Currently Amended) An image forming apparatus in which communication between a first controller and a second controller is performed via signal lines, wherein the first controller controls an engine section for forming an image, wherein the engine section includes which comprises a nonvolatile memory, and is constituted by an engine section which forms an image and a controller section which wherein the second controller transmits image data to the engine section first controller, the apparatus comprising:

transfer means for transferring rewrite data from the second controller to the first controller via a signal line to rewrite the nonvolatile memory, in synchronization with a control signal notified from the first controller to the second controller via another signal line; and means for establishing synchronization of data transfer by a predetermined control signal of serial communication when data should be transferred from the controller section to the engine section to rewrite the nonvolatile memory; and

rewriting means for rewriting the nonvolatile memory of the engine section by the rewrite data transferred in synchronism.

12. (Currently Amended) A controller ~~section~~ which transmits image data to an engine section which comprises a nonvolatile memory and forms an image, comprising:

~~interface means~~ communication paths for ~~interfacing~~ communicating with an engine controller of the engine section; and

~~mode designation data transmission means~~ a transmitter for transmitting mode designation data which designates a mode for rewriting the nonvolatile memory of the engine section. [[.]]

wherein the transmitter transmits data to the engine controller via a communication path to rewrite the nonvolatile memory, in synchronization with a control signal notified from the engine controller via another communication path after transmission of the mode designation data via the communication path.